

THE JOINT RESEARCH AND DEVELOPMENT BOARD

GRM 2/1
GRM 7/1

COMMITTEE ON GEOGRAPHICAL EXPLORATION

ANNEX "B"

To Agenda of Meeting on ***ARMY Declass/Release
Instructions On File***
TOPOGRAPHIC MODELS

A RELIEF GLOBE

1. The Request.

Two relief globes showing topography of the land areas and ocean bottoms have been requested by the Research and Development Division of the War Department General Staff and \$20,000.00 have been earmarked for their construction.

2. Existing Relief Globes.

Several relief globes have been constructed in the United States and in other countries, but the best available information indicates that none of these has been prepared at such a scale or from sufficiently up-to-date topographic and geodetic information as to satisfy the present demands of the scientific branches of the Services.

The Airforces had a large relief globe prepared during the war years, but it has already been found unsatisfactory for most uses. A member of the Plans and Operations Division of the General Staff recently prepared a 30" relief globe, but this is too small for the type of studies contemplated by the Research and Development Division.

There are many other relief globes in existence; but no one of them is based upon the much improved and greatly augmented

topographic and bathymetric information now available within the agencies of the Federal Government.

3. The Question of Specifications for A Relief Globe.

There are many interesting and difficult problems related to the construction and reproduction of a large relief globe which undoubtedly will affect any final specifications but it is suggested that discussion be directed, in so far as possible, toward the following topics and that detailed constructional problems be left for future considerations:

(a) What size globe would best serve the needs of all interested groups?

- 1:10,000,000 (approximately 50" in diameter)
- 1: 7,500,000 (approximately 75" in diameter)
- 1: 5,000,000 (approximately 100" in diameter)
- 1: 1,000,000 (approximately 42' in diameter)

(b) What degree of topographic detail is desirable?

(c) Will it be necessary to compile a new base map in incorporating the latest information from land and ocean bottom surveys? Should this be done on a spherical surface?

(d) What vertical scale would be most satisfactory?

(On a 1:10,000,000 scale globe, a vertical scale of 30 to 1 would make the Hymalayas a little over an inch high and Mt. Washington would be about 2/10 of an inch high).

(e) What information should appear on the finished globe?

- (f) What Agency or Agencies of the Government could construct the globe? Is there any commercial outfit with adequate equipment and trained personnel suitable to handle the construction on a contract basis?
- (g) In what medium or media should the globe be reproduced?
- (h) What estimate can be given as to the cost of constructing the original globe? How expensive would it be to obtain copies?
- (i) How long will it take to prepare the original globe?
- (j) What Agencies would desire copies of a large relief globe? How many might be requested?
- (k) Can funds from outside the federal Government be employed on such a project?